

AGENDA ITEM #3A  
May 19, 2016

**Introduction**

**MEMORANDUM**

May 17, 2016

TO: County Council

FROM:  Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Introduction:** 2016 National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit Financial Assurance Plan

On May 16, 2016, the County Executive transmitted Montgomery County's NPDES-MS4 Permit 2016 Financial Assurance Plan for Council approval (see ©1-34). A draft resolution is attached on ©1-3.

Maryland law (Md. Code Ann., Envir. §4-202.1(j)(4)(ii)) (SB 863, enacted in 2015) requires that Montgomery County transmit a financial assurance plan (FAP) every two years to the Maryland Department of the Environment (MDE). The first FAP (due by July 1, 2016) must demonstrate that the County has sufficient funding in the current fiscal year and subsequent fiscal year budgets to meet 75 percent of the estimated costs of its impervious surfaces restoration plan. Subsequent FAPs must show sufficient funding to meet 100 percent of the estimated costs for that plan's two year period.

The County Executive notes in his transmittal letter that his recommended FY17 Operating Budget assumes the full amount of expenditures needed to carry out the surfaces restoration requirements of the permit. On May 10, 2016, the Council tentatively approved the relevant portion of the County Executive's recommended budget (the FY17 Department of Environmental Protection Budget for the Water Quality Protection Fund). Final action by the Council on the FY17 Operating Budget is scheduled for May 26, 2016.

A public hearing on the FAP is scheduled for June 14. The Transportation, Infrastructure, Energy & Environment (T&E) Committee is scheduled to discuss this item on June 23, 2016. Council action is tentatively scheduled for June 28, 2016.

Attachment

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OFFICE OF THE COUNTY EXECUTIVE  
ROCKVILLE, MARYLAND 20850

Isiah Leggett  
County Executive

MEMORANDUM

May 16, 2016

TO: Nancy Floreen, Council President  
Montgomery County Council

FROM: Isiah Leggett, County Executive 

SUBJECT: 2016 National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit Financial Assurance Plan

The purpose of this memorandum is to transmit Montgomery County's 2016 Financial Assurance Plan (FAP) for County Council approval. The FAP demonstrates that the County has sufficient funding in the current fiscal year and subsequent fiscal year budgets to meet 100% of the estimated costs of its impervious surfaces restoration plan for the two-year period following the filing of this plan.

Maryland law (Md. Code Ann., Envir. § 4-202.1 (j) (4) (ii)) states that funding in the FAP is sufficient as long as it demonstrates that the County has dedicated revenues, funds, or sources of funds to meet 75% of the projected costs of the County's MS4 Permit required impervious surface restoration plan for the two-year period immediately following the filing date of the FAP (FY17 and FY18).

The 2015 revisions to Section 4-202.1 of the Environment Article, *Watershed Protection and Restoration Programs*, require all Maryland Phase I National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System (MS4) Permit jurisdictions to submit a Financial Assurance Plan (FAP) demonstrating that each jurisdiction will have adequate funding to meet their permit requirement for impervious surfaces restoration. The jurisdictions must submit a FAP to the Maryland Department of the Environment (MDE) by July 1, 2016, and every two years thereafter on the anniversary date of its MS4 permit, that details the following:

- All actions required to meet MS4 permit requirements
- Annual and projected five-year costs necessary to meet the "impervious surface restoration plan" (ISRP) requirement, more commonly known as the 20% restoration requirement in current permits

Nancy Floreen, Council President

MAY 16, 2016  
Page 2

- Annual and projected 5-year revenues that will be used toward meeting the 20% restoration requirement
- Any and all sources of funds used toward meeting MS4 permit requirements
- All specific actions and expenditures undertaken in the previous fiscal years to meet the 20% restoration requirement.

The FAP format is an excel workbook developed by MDE to capture most of the information needed to meet the requirements of the law. The workbook does not capture "All actions required to meet MS4 Permit requirements". MDE advised the Phase I jurisdictions to attach an executive summary identifying all permit actions required to meet MS4 permit requirements, such as the executive summary submitted in an MS4 annual report. The executive summary of Montgomery County's FY15 NPDES MS4 Annual Report, submitted to MDE in March 2016, is included in the FAP packet.

The Montgomery County Department of Environmental Protection completed the FAP using the recommended FY2017 Operating budget and the recommended FY2017-FY2022 CIP budget. This budget requested the full amount anticipated to carry out the impervious surfaces restoration requirements of the permit.

Section 4-202.1 requires that a jurisdiction's local governing body must hold a public hearing and approve the FAP before it can be submitted to MDE. Attached please find the Resolution 17-1140 to introduce the FAP to Council.

If you have any questions concerning this regulation or require additional information, please contact Steven Shofar, Chief of the Watershed Management Division, at 240-777-7736.

Attachments: (3)

Montgomery County's 2016 Financial Assurance Plan

Resolution 17-1140 Approval of Montgomery County's 2016 Financial Assurance Plan

Overview of the County's FY2015 NPDES MS4 Permit Annual Report

cc: Lisa Feldt, Director, Department of Environmental Protection

Jennifer Hughes, Director, Office of Management and Budget

Joe Beach, Director, Department of Finance

Marc Hansen, County Attorney

Bonnie Kirkland, Assistant Chief Administrative Officer

Resolution No.: \_\_\_\_\_  
Introduced: \_\_\_\_\_  
Adopted: \_\_\_\_\_

**COUNTY COUNCIL  
FOR MONTGOMERY COUNTY, MARYLAND**

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By: County Council

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**SUBJECT:** Approval of Montgomery County's 2016 Financial Assurance Plan

**Background**

1. The Financial Assurance Plan (FAP) is required by revisions to the Annotated Code of Maryland, Section 4-202.1, Watershed Protection and Restoration Program (May 2015), added to ensure that each National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Separate Storm Sewer System (MS4) jurisdictions will have adequate funding to meet their Phase I MS4 permit requirement for impervious surfaces restoration.
2. Each NPDES Phase I MS4 jurisdiction must submit to the Maryland Department of the Environment (MDE) a FAP by July 1, 2016, and every 2 years thereafter on the anniversary date of its MS4 permit, that details the following:
  - o All actions required to meet MS4 permit requirements
  - o Annual and projected 5-year costs necessary to meet the "impervious surface restoration plan" (ISRP) requirement, more commonly known as the 20% restoration requirement in current permits
  - o Annual and projected 5-year revenues that will be used toward meeting the 20% restoration requirement
  - o Any and all sources of funds used toward meeting MS4 permit requirements
  - o All specific actions and expenditures undertaken in the previous fiscal years to meet the 20% restoration requirement.
3. The County is required to submit the information for the FAP using a template provided by the MDE.
4. The Montgomery County Department of Environmental Protection completed the FAP using the recommended FY17 operating budget and the recommended FY17-FY22 CIP budget.
5. The MDE will determine whether the FAP demonstrates sufficient funding within 90 days after County filing.

6. For a plan filed on or before July 1, 2016, funding in the plan is sufficient if the plan demonstrates that the jurisdiction has dedicated revenues, funds, or sources of funds to meet 75% of the projected costs of compliance with the impervious surface restoration requirements under its permit for the 2-year period immediately following the filing date of the plan.
7. For the filing of a second or subsequent plan, funding in the plan is sufficient if the plan demonstrates that the jurisdiction has dedicated revenues, funds, or sources of funds to meet 100% of the projected costs of compliance with the impervious surface restoration requirements under its permit for the 2-year immediately following the filing date of the plan.
8. The FAP shows that the County has dedicated revenues, funds, or sources of funds to meet, for the two-year period immediately following the filing date of the FAP, 75% of the projected costs of compliance with the impervious surfaces restoration plan requirements of the County under its National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit over that two-year period.

**Action**

The County Council for Montgomery County, Maryland approves the Financial Assurance Plan for FY2016.

This is a correct copy of Council action.

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Linda M. Lauer, Clerk of the Council

Attachment 1

CERTIFICATION

WHEREAS, the provisions of § 4-202.1 of the Environment Article of the Annotated Code of Maryland require \_\_\_\_\_ (County/City) to file a financial assurance plan to the Maryland Department of the Environment that demonstrates that it has sufficient funding to meet the impervious surface restoration plan requirements of the (County's/City's) National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit; and

WHEREAS, the provisions of this law require that "a county or municipality may not file a financial assurance plan under this subsection until the local governing body of the county or municipality: (i) Holds a public hearing on the financial assurance plan; and (ii) Approves the financial assurance plan."

NOW, THEREFORE, I certify that:

1. A public hearing was held on the financial assurance plan on \_\_\_\_\_ (Date);
2. The local governing body approves the aforementioned financial assurance plan; and
3. Under penalty of law, the information in this financial assurance plan is, to the best of my knowledge and belief, true, accurate, and complete.

\_\_\_\_\_  
Signature of County Executive/Municipal Mayor or Chief Financial Officer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of County Executive/Municipal Mayor or Chief Financial Officer



**MONTGOMERY COUNTY MARYLAND  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) DISCHARGE PERMIT**

## I. Background

The Montgomery County Department of Environmental Protection's (DEP) submission to the Maryland Department of the Environment (MDE) fulfills the annual progress report requirement as specified in Part IV of Permit Number 06-DP-3320 MD0068349 (the Permit). The 5-year Permit term began February 16, 2010, covering stormwater discharges from the MS4 in Montgomery County, Maryland (the County). This is the sixth report in this current permit cycle (February 16, 2010-February 15, 2015) and covers the County's Fiscal Year 2015 (FY15) for July 1, 2014 to June 30, 2015. In addition, in August, 2015, the County submitted a supplement to the FY14 MS4 Annual Report that detailed the County's watershed restoration efforts over the first five years of the Permit cycle. The supplemental report is titled "Restoring Our Watersheds, Montgomery County's 2010-2015 MS4 Watershed Restoration Achievements."

The Permit has been in litigation since the Permit was issued in February 2010. On March 11, 2016 the Maryland Court of Appeals found that the Maryland Department of the Environment's decision to issue several stormwater discharge permits to counties in Maryland [including Montgomery] is supported by substantial evidence, is not arbitrary and capricious, and is legally correct. Additionally, these permits satisfy federal monitoring requirements and do not violate public participation mandates.

Significant accomplishments in the County's stormwater management program during FY15 are highlighted in the Overview. The report itself has been organized based on the headings in the Permit's Part III, Standard Permit Conditions, to document implementation of required elements. Information required by the Permit's Attachment A, Annual Report Databases, Parts A. through L. can be found electronically on the compact disc (CD) submission in Appendix A.

The DEP Watershed Management Division (WMD) has primary responsibility for the majority of the Permit requirements, including interagency coordination, annual reporting, source identification, discharge characterization, monitoring, stormwater facility inspection and maintenance, enforcement, watershed public outreach, watershed assessment and restoration. WMD is also responsible for assessment of stormwater controls, and for tracking progress towards meeting the County's Total Maximum Daily Load (TMDL) urban stormwater wasteload allocations (WLAs) in applicable watersheds. The DEP Division of Solid Waste Services (DSWS) is responsible for all solid waste related programs, including programs to increase awareness of waste reduction and recycling. The DEP Division of Environmental Policy and Compliance (DEPC) is responsible for illicit discharge detection and elimination, and the environmental enforcement, including investigation of water pollution and illegal dumping incidents.

The Department of Permitting Services (DPS) is responsible for reviewing and permitting plans for stormwater management (SWM) and erosion and sediment control (ESC), and for ensuring plan compliance. The Department of Transportation (DOT) is responsible for storm drains, road and roadside maintenance. The Department of General Services, (DGS), DEP's DSWS, and

DOT are responsible for property maintenance activities at County-owned facilities covered under the NPDES General Permit for Stormwater Discharges Associated with Industrial Activity.

The Permit required DEP to develop and submit a countywide implementation plan within 1 year of Permit issuance to identify how the County would achieve Permit requirements within the 5-year permit cycle. In February 2011, DEP submitted the draft Montgomery County Coordinated Implementation Strategy (the Strategy) and associated Watershed Implementation Plans to MDE with the FY10 MS4 Annual Report. The Strategy presents the restoration and outreach initiatives that are needed to meet the watershed-specific restoration goals and water quality standards, and is referenced frequently in this report. Specifically, the Strategy provides the planning basis for the County to:

1. Meet Total Maximum Daily Loads (TMDLs) and Wasteload Allocations (WLAs) approved by the U.S. Environmental Protection Agency (EPA).
2. Provide additional stormwater runoff management on impervious acres equal to 20 percent of the impervious area for which runoff is not currently managed to the maximum extent practicable (MEP).
3. Meet commitments in the *Trash Free Potomac Watershed Initiative 2006 Action Agreement* which include support for regional strategies and collaborations aimed at reducing trash, increasing recycling, and increasing education and awareness of trash issues throughout the Potomac Watershed.
4. Educate and involve residents, businesses, and stakeholder groups in achieving measurable water quality improvements.
5. Establish a reporting framework that will be used for annual reporting as required in the County's Permit.
6. Identify necessary organizational infrastructure changes needed to implement the Strategy.

The MDE approved the Strategy in July 2012. The approval letter can be found in the electronic attachment to this report in Appendix B. A final version of the Strategy, and Watershed Implementation Plans, are accessible on DEP's website at:

<http://www.montgomerycountymd.gov/DEP/water/county-implementation-strategy.html>.

### **Montgomery County Wins National Award for Its MS4 Program Management**

Montgomery County was one of six recipients of the new national municipal stormwater and green infrastructure awards at the 88<sup>th</sup> Annual Water Environment Federation (WEF) Technical Exhibition and Conference held September 28, 2015, in Chicago. Montgomery County won the Phase I program management category for its multifaceted and effective MS4 program and was recognized as a national leader in stormwater management.

Developed through a cooperative agreement with the U.S. Environmental Protection Agency, the award recognizes high-performing, regulated MS4s and inspires municipal government agencies to exceed requirements through innovative and cost-effective approaches.

“Montgomery County has made tremendous progress in meeting our water quality goals,” said Lisa Feldt, director of the County’s Department of Environmental Protection. “We are very grateful to be recognized on a national scale for our continued efforts to address stormwater pollution and to work to restore our streams and rivers and ultimately the Chesapeake Bay. This award reflects the close coordination and cooperation among County departments, agencies and co-permittees and the strong commitment they share for watershed management, restoration and improved water quality, while also working hand-in-hand to achieve sustainable economic growth.”

“The awards were developed to inspire MS4 program leaders toward innovation that is both technically effective and financially efficient,” said WEF Executive Director Eileen O’Neill. “The success of this first year shows great promise for the program as a means to continually support, encourage and recognize this important and growing segment of the water sector.”

## II. Overview

This Overview highlights County progress in meeting Permit requirements for FY15, and where possible, over the 6-year Permit term.

### Legal Authority

*The Permit requires the County to maintain adequate legal authority in accordance with NPDES regulations 40 CFR Part 122 throughout the term of the Permit.*

#### **Chapter 19 of the Montgomery County Code- The Stormwater Management Ordinance:**

Chapter 19 establishes minimum requirements and procedures to control the adverse impacts associated land disturbance and increased stormwater runoff from developed and developing lands. Chapter 19 includes:

- Article I - Establishes the County's legal authority to administer a Sediment and Erosion Control program
- Article II - Establishes the County's legal authority to administer a Stormwater Management Program
- Article IV - Establishes the County's authority to regulate discharges of pollutants to County streams, and establish inspection and enforcement procedures and penalties for non-compliance.

#### **Chapter 19 was modified during the current Permit cycle to add:**

##### Stormwater Management

In July 2010 and March 2011, the County Council passed Bill 40-10 and Expedited Bill 7-11, amending the County's stormwater management law to require management of stormwater runoff through the use of nonstructural best management practices (BMPs) to the maximum extent practicable (MEP) for new development and redevelopment projects approved by DPS. The bills then brought the County's stormwater management law into compliance with the Maryland Stormwater Management Act of 2007 and associated state implementing regulations adopted in 2010.

##### Sediment and Erosion Control

On March 29, 2013, the County Council passed Expedited Bill 1-13, Erosion and Sediment Control, which brings local erosion and sediment control requirements into compliance with the Maryland Stormwater Management Act of 2007 and the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

##### Water Quality Protection Charge

In April 2013, the County Council passed Bill 34-12, Stormwater Management-Water Quality Protection Charge (WQPC). Bill 34-12 modified the structure of the County's original WQPC to comply with the 2012 State HB 987, the Stormwater Management- Watershed Protection and Restoration Program Bill.

In April, 2015, the County Council passed Bill 2-15, which extended the deadline for submittal of both credit and financial hardship exemptions to September 30 of each year, after annual property tax bills are posted in July.

In November 2015, the Council enacted legislation (Bill 45-15, Stormwater Management - Water Quality Protection Charge – Curative Legislation) to designate the WQPC as an excise tax instead of a fee to address concerns raised in a Circuit Court opinion. This legislation was enacted outside the FY15 reporting period.

#### Coal Tar Sealants

In September 2012, the County Council passed the Coal Tar Pavement Products Law, Bill 21-12, that banned the use of coal tar products, effective December 18, 2012.

#### **Other Legislation Enacted During the Current Permit Cycle:**

##### Carryout Bag Law

The County's Carryout Bag Tax, Bill 11-8, went into effect on January 1, 2012. The law taxes 5 cents to a customer of certain retail establishments for each paper and plastic bag provided at the point of sale. The Department of Finance is responsible for enforcement of the Bag Tax. The law was passed to increase awareness of plastic bag litter pollution and reduce the use of carryout bags.

##### Expanded Polystyrene Food Service Ware

In January 2015, the County passed Bill 41-14, which bans the use and sale of expanded polystyrene food service ware and loose fill packaging. The Bill requires that disposable food service ware purchased and used in the County be either recyclable or compostable. The legislation is effective for County agencies, contractors and lessees by January 1, 2016, and for all other food service businesses by January 1, 2017.

##### Pesticides – Notice Requirements – Cosmetic Pesticide Use Restrictions

County Bill 52-14, Pesticides – Notice Requirements – Cosmetic Pesticide Use Restrictions, became law on October 20, 2015. This law:

1. Regulates the use of certain substances on lawns in the County, and permits only those substances that (a) contain active ingredients recommended by the National Organic Standards Board or (b) that are designated as minimum risk pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). This provision takes effect January 1, 2018.
2. Places additional notification requirements on pesticide retailers and applicators.
3. Requires the implementation of a public outreach and education campaign related to the law.
4. Requires Montgomery County Parks to implement a pesticide-free parks program.

## Source Identification

*The Permit requires the County to submit information for all County watersheds in geographic information systems (GIS) format with associated tables.*

The County continues to improve its storm drain mapping to facilitate identification of pollution sources from the MS4.

The DEP's Urban BMP database as of June 30, 2015, with associated coverage is included in Appendix A, Part B. Over the Permit term, DEP made progress towards updating the drainage areas of all stormwater BMPs.

The County's 2009 impervious area associated with GIS coverage, which was used in the Strategy development, is included in Appendix A, Part C. In this Permit cycle, the County evaluated success towards meeting its Permit restoration requirements using the 2009 impervious coverage. In FY15, DEP continued to digitize and update impervious areas for other Permit requirements and for the County's stormwater utility charge, the WQPC, based on 2014 aerial photography.

The DEP's monitoring locations and locations of watershed restoration projects are also included electronically in Appendix A, Parts D. and E.

## Management Programs

### **Stormwater Management (SWM) Facility Maintenance and Inspection**

*The Permit requires the County to conduct preventative maintenance inspections of all SWM facilities (BMPs) on at least a triennial basis.*

The DEP SWM Facility Maintenance and Inspection Program oversees the triennial inspections, and structural and nonstructural maintenance of all SWM BMPs under the County's jurisdiction. From FY11- FY15, the number of SWM BMPs under County jurisdiction increased from 4,200 to over 8,740. From FY11- FY15, DEP oversaw 6,639 triennial inspections and 9,934 SWM BMPs were maintained by either the DEP structural maintenance program or by the private owner of the facility. DEP also issued over 600 Notice of Violations (NOVs) for correction of deficiencies noted during the triennial inspections. Additionally, DEP sent more than 531 routine maintenance notification letters to property owners. DEP also performed a total of 167 unscheduled inspections. These occurred in response to public complaints, at facilities being considered for transfer into DEP's SWM facility maintenance program, or to assess conditions after a large storm event.

During the Permit term, the SWM Facilities Maintenance and Inspection Program developed new protocols to remain in compliance with County and State SWM facility maintenance requirements while remaining fiscally responsible:

- In December 2012, DEP acquired contractual services for routine maintenance of publically owned environmental site design (ESD) practices, including Roadway Right-of-Way (ROW), beginning one of the first ESD maintenance programs in the Washington metropolitan area.

- During FY13, DEP developed a protocol to rank maintenance need levels for privately owned and maintained facilities. The new protocols ensure that the BMPs with the most serious repair needs are addressed in a timely manner.
- In FY13-FY14, DEP also modified the inspection protocol for public and private underground facilities. The new inspection protocol requires a pre-maintenance inspection of the facility to determine maintenance needs. Facilities deemed acceptable and functioning properly pass inspection and do not need maintenance until the next pre-maintenance inspection or triennial inspection.
- In FY15, many of the first permitted and installed ESD facilities were due for triennial inspections. The inspections were not performed because DEP does not have the legal authority via right of entry agreements to access facilities on private property. DEP is working with DPS to include right of entry agreements for all sediment and erosion control permits.

### **Implementing Maryland's Stormwater Management Act of 2007**

*The Permit requires the County to implement SWM design policies, principles, methods, and practices found in the 2000 Maryland Stormwater Design Manual and provisions of Maryland's Stormwater Management Act of 2007. The Permit requires the County to modify its SWM ordinances, regulations and new development plan approval processes within one year after State adoption of regulations; April 24, 2009, with an effective date of May 4, 2009. The Permit also requires the County to review local codes and ordinances to identify impediments to and opportunities for promoting ESD to the MEP within one year, and to remove those impediments within two years of the Permit's issuance.*

As described under the section "Legal Authority", in July 2010 and March 2011, the County Council passed Bill 40-10 and Bill 7-11 amending the County's stormwater management law to comply with the Maryland Stormwater Management Act of 2007 and associated state implementing regulations adopted in 2010.

In 2010, the County released *Implementing Environmental Site Design in Montgomery County*, a report that summarizes how the County's codes, regulations, programs, and policies may need to be updated to allow the use of ESD techniques to the MEP. The most significant updates required were accomplished through the Zoning Code rewrite, completed by the Planning Department of the Maryland-National Capital Park and Planning Commission (M-NCPPC). The zoning code rewrite, Zoning Text Amendment (ZTA) 13-04 was approved by Council March 5, 2014, and took effect October 30, 2014.

The DEP's Watershed Restoration Program identifies opportunities for impervious area control, including ESD practices, in County watersheds through comprehensive watershed assessments. DEP prioritizes those projects that can be combined with other watershed restoration to implement a holistic program that captures, and infiltrates stormwater while creating and maximizing ecological benefits and increasing connection of green areas in the County. DEP's Watershed Restoration CIP budget reflects the commitment to implementing ESD practices on public property; since 2010, funding for ESD practices increased from 26% in the approved FY2011-FY2016 CIP budget to 39% in the approved FY2015-FY2020 CIP budget

In FY16, DEP is working with community partners to evaluate and develop future approaches to incorporate ESD and other green infrastructure practices into DEP watershed restoration planning, and ultimately into other Countywide programs. DEP and its partners are developing a green infrastructure definition that will reflect DEP's support of ESD, and also recognize ecological benefits of DEP's restoration priorities. DEP has begun drafting an official Department wide policy that will reflect the Department's focus of incorporating green infrastructure approaches. DEP is also working with community partners to identify and implement an innovative green infrastructure pilot project.

**Erosion and Sediment Control (ESC)**

*The Permit requires the County to maintain an acceptable ESC program, including implementing program improvements identified in any MDE evaluation of the County's application for the delegation of ESC enforcement authority, conduct responsible personnel certification classes and report quarterly information on earth disturbances exceeding one acre or more.*

Table II.1, below, summarizes the County's Erosion and Sediment Control Inspection and Enforcement Program over the Permit term.

	FY11	FY12	FY13	FY14	FY15	Total
Inspections	13,472	11,191	12,439	18,151	20,793	76,046
NOVs	343	248	235	520	511	1,857
Citations	146	105	103	160	162	676
Fines Collected	\$43,926	\$55,750	\$67,000	\$82,350	\$94,955	\$343,981

**Illicit Discharge Detection and Elimination (IDDE)**

*The Permit requires the County to implement an inspection and enforcement program to ensure that all discharges to and from the MS4 system that are not composed entirely of stormwater are either permitted by MDE or eliminated. The Permit requires the County to field screen 150 outfalls annually, conduct routine surveys of commercial and industrial areas, and maintain an enforcement program to address discharges, dumping and spills.*

In FY15, DEP performed outfall screening in subwatersheds of the Northwest Branch of the Anacostia watershed. DEP screened 159 outfalls and found 75 with dry weather flow. DEP performed field testing for permit required water chemistry parameters and also for ammonia, potassium and fluoride. Twenty-three outfalls had elevated parameters, and follow up investigations were performed. Of those 23 outfalls, 18 were found to have normal water chemistry parameters during follow up visits. Table II.2 shows the problems identified at the remaining outfalls.

Table II.2. Investigation Results of Suspected Illicit Discharges During FY15			
Outfall ID	Location	Problem Found	Resolution
KP122P6632	10110 New Hamp Ave	Organic matter buildup	Property Management unclogging outfall
KP122P6633	10110 New Hamp Ave	Outfall destabilized with high specific conductivity	State Highway Association (SHA) repairing and cleaning outfall
KP122P6647	Capital Beltway	Outfall destabilized with high specific conductivity	SHA repairing and cleaning outfall
KP122P6635	10142 New Hamp Ave	Elevated detergents	Investigation ongoing
KP123P0285	10214 Royal Rd	Elevated ammonia	Site to be CCTV'ed and investigated further

Table II.3, below, summarizes DEP's IDDE program during the Permit term. From FY11-FY15, DEP assessed 716 outfalls by walking the entire reach of waterbodies in four separate subwatersheds, capturing most of the existing outfalls in each drainage area. DEP is targeting subwatersheds with the highest percentages of commercial and industrial areas to identify and eliminate pollutant sources in those areas.

Table II.3. Illicit Discharge Detection and Elimination Summary, FY11-FY14		
		% of Total
Outfalls Screened	875	
Outfalls Unmapped	606	70% of Total Outfalls Screened
Suspected Illicit Discharges	119	13% of Total Outfalls Screened
Resulting Investigations	79	9% of Total Outfalls Screened
Problem Resolved	16	1.8% Of Total Outfalls Screened

Enforcement Actions

DEP's Division of Environmental Policy and Compliance (DEPC) implements a highly effective environmental enforcement program that has great success in eliminating discharges reported by the public. Over the Permit term, the group has responded to 998 water quality related complaints, which led to 157 enforcement actions.

Most complaints are reported to DEP through the County's call center for non-emergency services (311), or through the DEP website.

DEPC also investigates illegal dumping complaints. Details on the enforcement actions over the Permit term are summarized in Table II.4.

Table II.4. Summary of Enforcement Actions, FY11-FY15

	FY11	FY12	FY13	FY14	FY15	Total
Water Quality Investigations	122	208	206	238	224	998
NOV	16	17	14	28	24	99
Citations	18	14	11	6	9	58
Fines Collected	\$9,000	\$7,000	\$6,000	\$3,000	\$4,500	\$29,500
Illegal Dumping Cases	471	450	377	354	385	2,037
NOVs	34	36	16	18	8	112
Citations	7	11	0	2	0	20
Fines	\$3,500	\$5,500	0	\$1,000	0	\$10,000

**Trash and Litter**

*The Permit requires the County to meet its obligations under the Potomac River Watershed Trash Treaty, including trash abatement program implementation, education, and evaluation.*

The Strategy includes trash reduction work plans designed to meet the Potomac Trash Free Treaty goals and the MS4 wasteload allocations for the 2010 Anacostia Trash TMDL. The County is also working with the Anacostia Watershed Restoration Partnership, the Alice Ferguson Foundation, and other partners to meet regional trash reduction goals. Initiatives directly related to the regional campaigns include ongoing education and outreach for recycling and litter reduction, mass media outreach campaigns, and litter removal from streets, stormwater ponds, and transit stops.

On January 1, 2012, the County's Carryout Bag Tax, Bill 11-8, was passed to reduce plastic bag pollution in streams and communities. The Carryout Bag Tax requires certain retailers to charge customers 5 cents for each paper and plastic bag provided to carry purchases. From the implementation to June 2015, over 209 million bags were sold in Montgomery County. In FY15, approximately 62 million carryout bags were sold. This represents an average of a little less than five disposable bags bought per county resident each month. As of June 2015, there are 1,251 registered retailers in the system. Carryout Bag Tax data analysis to date suggests a slight downward trend; however, DEP does not have enough data to definitively report a change in bag usage for the County.

In FY16, DEP is working with the County Department of Finance to increase awareness of the law among retailers and the public by expanding Carryout Bag Tax outreach. The goals of the program are to increase retailer compliance and public awareness of plastic bag pollution. Elements of the program include updating and distributing outreach materials, direct contact with retailers, and a public re-useable bag distribution through libraries, Manna food distribution centers, and community aid offices. DEP will reanalyze Carryout Bag Tax data after one year of the expanded outreach effort to determine effectiveness.

In FY15, DEP DSWS also took steps to reduce expanded polystyrene, another material frequently found to pollute local communities and streams. In January 2015, the County Council enacted Bill 41-14 which bans the use and sale of expanded polystyrene food service ware and loose fill packaging and instead requires that disposable food service ware purchased and used in the County be either recyclable or compostable. The Bill requires all county agencies, contractors, and lessees to use compostable or recyclable food service ware by January 1, 2016. All other food service businesses must use compostable or recyclable food service ware by January 1, 2017. Expanded polystyrene (PS) #6 products are not recyclable in the County. In FY15, DEP DSWS developed an education campaign to inform food service businesses, certain retailers and consumers about the requirements and the deadlines for compliance.

The DEP continues via contract to conduct trash monitoring and assessment in the Anacostia Watershed. FY15 highlights include:

- Completed five cycles of post-TMDL trash monitoring in the Anacostia. The Anacostia tributary monitoring follows the same protocols for stream-level and land-based surveys as those used for trash TMDL development. As of FY15, there is a general decreasing trend for plastic bag, plastic bottle and Styrofoam trash categories.
- The Anacostia monitoring program identified the White Oak neighborhood of Silver Spring as an area with high levels of litter. In FY15, DEP conducted three additional types of observation surveys within that focus area. The surveys included a bus stop survey, walking survey, and storm drain inlet survey. Results will be used to develop targeted trash reduction outreach strategies that can then be measured for effectiveness, and help inform future litter reduction efforts.

### Property Management

*The Permit requires the County to ensure that a Notice of Intent (NOI) has been submitted to MDE, and a pollution prevention plan developed, for each County owned and municipal facility requiring a NPDES General Permit for Stormwater Associated with Industrial Activities.*

Table II.5 lists the County facilities covered under the MDE General Discharge Permit for Storm Water Associated with Industrial Activities (the General Permit). The MDE accepted Notices of Intent (NOI's) for these facilities in August 2014 for coverage until December 31, 2018.

Table II.5. County Facilities Covered under the Maryland General Discharge Permit for Storm Water Associated with Industrial Activities	
Name of Facility / Responsible Agency	Watershed / Acreage
Colesville Highway Maintenance Depot (DOT)	Anacostia/Paint Branch; 12 acres
Damascus Highway Maintenance Depot (DOT)	Potomac/Great Seneca: 1.4 acres
Gaithersburg: Highway Maintenance Facility (DOT)	Potomac/Rock Creek: 15.1 acres
Gaithersburg: Equipment Maintenance and Transit Operations Center (EMTOC) (DGS)	
Poolesville Highway Maintenance Facility (DOT)	Potomac/Dry Seneca Creek: 4 Acres

Table II.5. County Facilities Covered under the Maryland General Discharge Permit for Storm Water Associated with Industrial Activities	
Name of Facility / Responsible Agency	Watershed / Acreage
Bethesda/Seven Locks Automotive Service Center (DGS)	Potomac/Cabin John Creek: 19 Acres
Bethesda/Seven Locks Highway Maintenance Facility, Sign Shop and Signal Shop (DGS)	
Kensington Small Transit Service Maintenance Facility at Nicholson Court	Potomac/Rock Creek: 3.31 acres
Silver Spring/Brookville Road Highway Maintenance Facility (DOT)	Potomac/Rock Creek: 18 Acres
Silver Spring/Brookville Road Transit Center/ Fleet Maintenance Center (DGS)	
Shady Grove Processing Facility (DEP)	Potomac/Rock Creek; 43 out of 52.5 acres
Gude Landfill (DEP)	Potomac/Rock Creek; 120 acres
Oaks Landfill (DEP)	Patuxent/Hawlings River (355 acres) and Potomac/Rock Creek;(190 acres)

In 2008, new Capital Improvement Program (CIP) funding dedicated to environmental compliance was added to the DGS budget. In 2015, the following environmental compliance CIP initiatives were accomplished:

- DGS is replacing a major transit bus refueling station in Silver Spring, and is installing 3 above ground diesel refueling tanks to replace 2 aging underground tanks. The bus wash steam bay was also upgraded with improved waste water treatment structures.
- DGS is also currently replacing underground storage tanks with aboveground storage tanks at County fire stations and other government facilities.
- Design continued for FY16 planned improvements including three new permanent structures for the bulk storage of highway maintenance materials (topsoil, sand, salt & gravel). The fabric canopy at the Silver Spring depot was replaced, as it was showing signs of failure.
- Two bioretention basins, and a bioswale feature were installed at the Colesville Highway Maintenance depot, to improve the stormwater quality of this facility, which is located within a Special Protection Area. In addition, three large fabric canopies, and an enlarged truck shed area are being constructed for the covered storage of roadway materials and equipment.
- New antifreeze and motor oil handling tanks and distribution systems were installed at the Seven Locks automotive shop.

- DGS/DOT has begun routine mechanical sweeping of all the industrial facilities, and increasing the cleaning frequency of facility oil/grit separators. In FY15, all depots were swept.
- At the Bethesda Depot, the bulk salt storage barn was repaired and repainted to prevent wood deterioration.

The MCPS conducted pollution prevention (P2) training for staff, prepared and implemented SWPPP and SPCC plans at all industrial sites. P2 improvements have been implemented at these sites as recommended by the annual inspections. MCPS also continued to implement an Integrated Pest Management Program (IPM) program at all facilities. Table II.6 lists the MCPS facilities covered under the MDE General Discharge Permit for Storm Water Associated with Industrial Activities (the General Permit).

Table II.6. Inventory and Status of MCPS Facilities Covered under the Maryland General Discharge Permit for Storm Water Associated with Industrial Activities (12-SW)		
Name of Facility / Responsible Agency	Watershed / Acreage	Status
Bethesda Fleet Maintenance / Bethesda Facilities Maintenance Depot	Cabin John Creek 6.2 acres	NOI accepted for registration under the NPDES General Permit. SWPPP updated in FY14.
Randolph Fleet Maintenance / Randolph Facilities Maintenance	Anacostia 9.3 acres	NOI accepted for registration under the NPDES General Permit. SWPPP updated in FY14.
Shady Grove Fleet Maintenance / Shady Grove Facilities Maintenance	Rock Creek 15 acres	NOI accepted for registration under the NPDES General Permit. SWPPP updated in FY14.
West Farm Transportation Depot	Anacostia River 5.06 acres	NOI accepted for registration under the NPDES General Permit. SWPPP updated in FY14.
Clarksburg Fleet Maintenance/Clarksburg Facilities	Seneca Creek 15.11 acres	NOI accepted for registration under the NPDES General Permit. SWPPP updated in FY14.

### Road Maintenance

*The Permit requires the County to continue to implement a program to reduce pollutants associated with road maintenance activities.*

#### Street Sweeping

In FY15, the County continued its street sweeping program, focusing on twice monthly sweeping of 229 miles in selected arterial routes, removing 327 tons of material. The sweeping frequency provides impervious acreage control equivalence and pollutant reduction credit in accordance

with MDE's August 2014 "*Accounting for Stormwater Wasteload Allocations and Impervious Acreage Treated*" guidance document. For FY15, the County controlled an impervious acreage equivalent of 130 acres and reduced 1143 pounds of Total Nitrogen (TN) and 458 pounds of Total Phosphorous (TP) through its arterial street sweeping program.

The DOT completed annual sweeping for all residential routes. In FY15, DOT swept a total of 4,055 residential curb miles once per year, removing 1,265 tons of material.

#### *Inlet Cleaning*

For FY15, DOT reported cleaning 2,218 storm drain inlets, and 31,180 linear feet of storm drain, collecting 346 tons of material, resulting in an impervious acre control equivalence of 138 impervious acres.

#### *Use of Herbicides*

The County's roadside noxious weed spraying program is conducted by Montgomery Weed Control Inc., a cooperative weed control program between Montgomery County Department of Economic Development, Agricultural Services Division, and the Maryland Department of Agriculture, Plant Protection and Weed Management Section. The County uses no other pesticides or any fertilizers for roadside vegetation management.

#### *Application of Sand and Salt*

The DOT reported applying 87,900 tons of salt and 36,400 gallons of salt brine to County roadways during December through March, 2015. Salt brine is a 23 percent salt solution created in a brine maker that has a lower freezing point than salt. In FY15, over 606 lane miles of both primary and secondary roads received salt brine applications using contracted and County equipment.

### **Public Education and Outreach**

*The Permit requires the County to implement a public education and outreach program to reduce stormwater pollutants.*

Over the Permit term, DEP continued to expand its education and outreach programs to meet Permit requirements as outlined in the Strategy's Public Outreach and Stewardship Work Plan (POSWP). The POSWP identified eight major areas of stormwater impact education, including pet waste management, lawn stewardship, anti-littering, stormwater awareness, and establishing a volunteer Stream Stewards program. Through FY15, DEP has participated in 459 events focused on stormwater awareness, representing direct contact with an estimated 47,798 residents. The RainScapes program hosted an additional 144 workshops on small scale stormwater practices for homeowners and landscape professionals, reaching an additional 6,500 residents.

The DEP tracks details on watershed outreach events, and has included event information in the Permit required Annual Report Database, Part D, found electronically in Appendix A. DEP hopes to eventually quantify pollutant reductions associated with behavior changes resulting from its education and outreach programs.

Summary of Stormwater Outreach Efforts During the Permit Term

The DEP expanded its outreach and stewardship during this fiscal year and throughout the Permit cycle. Outreach and stewardship highlights include:

- General watershed outreach activities increased 800 percent from FY10 to FY15
- Created the Montgomery County Watershed Restoration and Outreach Grant Program, which funds community based restoration projects and programs focused on public engagement through education, outreach and stewardship. Administered by the Chesapeake Bay Trust, \$371,756 was awarded to 13 nonprofit organizations in FY15.
- Creating a "My Green Montgomery" website as a public interactive website to promote green initiatives and activities.
- Creating additional outreach programs, including:
  - The Stream Stewards Volunteer Outreach Program
  - A Pet Waste Management Program targeted to homeowners' associations
  - A Storm Drain Art Program
  - The Montgomery County FrogWatch USA chapter
  - The Greenfest annual community event
  - Worked with other DEP sections to display comprehensive information on DEP programs to over 5,000 visitors at the 2014 Montgomery County Agricultural Fair
  - The "Caching the Rain" stormwater awareness geotrail
- Focused outreach to culturally diverse communities increased, including translations for 22 publications.
- Creation of 43 new outreach publications.
- Achieving a social media presence by creating DEP Facebook, Twitter, Instagram, Flickr and blog accounts including five group listserves and e-newsletters.
- Creating a watershed group capacity building effort which helped eight watershed groups build stronger organizational structures.
- Two new watershed groups were created since FY10: Muddy Branch Alliance and the Watts Branch Alliance.
- The Water WatchDogs group, started by the Friends of Sligo Creek watershed group as a means to raise public awareness on water pollution and enhance an email alert mechanism for reporting pollution incidents.

## Watershed Assessment

*The Permit requires the County to conduct a systematic assessment of water quality within all of its watersheds, including identification of water quality improvement opportunities, and the development and implementation of plans to control stormwater discharges to the MEP.*

### Watershed Implementation Plans

In FY14, DEP completed preliminary assessments of the Lower Monocacy, Patuxent River, Upper and Lower Potomac Direct, Dry Seneca and Little Seneca watersheds. These assessments include identification of ESD opportunities, stormwater pond retrofits, new stormwater control opportunities, and potential stream restoration. Watershed implementation plans were completed in early FY15 that built on the preliminary assessments and contain more detailed implementation planning and schedules to meet regulatory and programmatic targets.

### Stream Monitoring

The County conducts biological monitoring for fish and benthic macroinvertebrates (aquatic insects) on a calendar year basis. In 2014, DEP monitored 52 stations in the Potomac River Direct, and Cabin John watersheds and subwatersheds of the Seneca Creek watershed. The results remained fairly consistent with monitoring conducted between 1996 and 2002. Stream conditions generally improve toward the western part of the county where land use is more rural and part of the agricultural reserve. The more urban areas with older stormwater management generally have poorer and/or declining conditions.

Restoration projects have been focused in urban, southern and eastern county watersheds of Little Falls and Cabin John. Most projects in Little Falls were completed prior to 2008 and impacts appear limited to date. Since 2002, the average stream conditions have been constant. Average stream conditions in Cabin John also continue to be constant. The restoration projects generally have been completed close to the 2014 monitoring cycle, allowing little time for recovery.

In 2015, DEP monitored the Monocacy watershed including Bennett Creek, Little Bennett Creek, and Furnace Branch, and the Patuxent watershed including the Tridelphia Reservoir watershed, and the Rocky Gorge Reservoir watershed. Results of that monitoring will be presented in the FY16 MS4 Annual report.

## Watershed Restoration

*The Permit requires the County to implement practices identified in its watershed assessments to control stormwater discharges to the MEP. The Permit specifically requires the County to complete the implementation of restoration projects identified in the previous Permit term to restore 10% of the County's impervious surface area. The permit also requires the County to complete the implementation of restoration to restore an additional 20% of the County's impervious surface area that is not restored to the MEP.*

The Strategy provides the planning basis to meet the Permit's restoration requirement. DEP developed the Strategy using 2009 data, including impervious area and BMP drainage areas.

The DEP is implementing watershed restoration projects to add stormwater management, improve water quality and minimize physical impacts to streams from uncontrolled urban runoff. Stormwater management facility retrofits, new stormwater facilities, ESD practices and stream restoration projects are planned and designed through DEP's Watershed Restoration Program and constructed by the DEP's Construction Section. DEP continues to assess emerging stormwater control guidance and County data critical to watershed planning to ensure that the most beneficial, and cost effective projects are selected for implementation.

The County continues to improve GIS data to accurately account for the impervious area controlled within the MS4 boundary. Data improvements include digitizing impervious areas, updating the urban BMP database and refining existing BMP's drainage areas.

In August 2015, DEP released a supplement to the MS4 FY14 Annual Report that summarized the County's progress and achievements towards meeting the Permit restoration requirements over the 5 year Permit term. This supplement is titled "Restoring Our Watersheds, Montgomery County's 2010-2015 MS4 Watershed Restoration Achievements".

<https://www.montgomerycountymd.gov/DEP/Resources/Files/downloads/water-reports/npdes/MoCo-RestorationAchievements-080715REV2.pdf>

### **Progress Towards Meeting the 2010 MS4 Permit Watershed Restoration Goal**

The DEP has an aggressive watershed restoration program to meet the current Permit's requirement to add control to 20 percent of the impervious areas not currently controlled to the MEP (3,777 impervious acres). Since 2009 and through FY15, the County and its partners have:

- Completed projects through FY15, adding control to 1,774 impervious acres.
- Begun construction of projects during FY16 that will treat an additional 170 uncontrolled impervious acres.
- Released task orders to DEP's water resources engineering consultants to design watershed restoration projects that will control more than 2,400 additional acres of uncontrolled impervious area.
- Facilitated partnership projects with other County and external agencies. These projects are currently in design and under construction, and include facility modification and modernizations performed by DOT, DGS, and MCPS, and WSSC's stream restoration activities during their asset modernization. They also include the Maryland State Highway Administration's (SHA's) Inter County Connector (ICC) stewardship partnership projects.
- Installed over 470 small scale ESD stormwater practices along County roadways to capture previously uncontrolled impervious (DEP Green Streets).
- Restored over 5 miles of County streams.
- Constructed over 13 new/upgraded stormwater ponds.
- Reforested 6 pervious acres.

- Developed an interactive web map for DEP's Watershed Restoration website that provides project details and schedules to residents.
- Created and began utilization of enhanced data management tools including a business intelligence tool, a portfolio tool, and an upgraded database.

### **Meeting Wasteload Allocations in Watersheds with EPA approved Total Maximum Daily Loads**

*The Permit requires the County to report progress toward meeting any applicable WLAs developed under EPA approved TMDLs in watersheds where restoration has occurred.*

The Strategy used the Watershed Treatment Model (WTM) to verify pollutant baseline loads in TMDL watersheds, and estimate pollutant load reductions by SWM BMPs and retrofits constructed after TMDL baseline years. DEP then calculated pollutant reductions from stream restoration projects using efficiencies provided in MDE's August 2014 *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated*. County stormwater controls and watershed restoration initiatives implemented in County watersheds with TMDLs after the TMDL baseline years have made progress towards meeting watersheds WLAs by removing a combined estimated:

- 1,137 billion MPN/year of E.coli,
- 33,622 billion MPN/year Enterococci,
- 4,481 tons/year of sediment,
- 17,966 pounds/year of nitrogen,
- 7,903 pounds/year of phosphorus,
- 11,124 pounds/ year of trash from the Anacostia watershed.

Since 2010, the baseline year of the Chesapeake Bay TMDL, an estimated 25,216 pounds of nitrogen, and 4,916 pounds of phosphorous total have been removed from Countywide stormwater runoff. This estimate includes restoration work in all County watersheds, including those with and without TMDLs for nitrogen and phosphorous.

### **RainScapes Program**

The DEP's RainScapes program promotes and implements environmentally friendly landscaping, small scale stormwater control and infiltration projects on residential, institutional, and commercial properties. DEP offers technical and financial assistance to property owners for eligible RainScapes techniques, such as rain gardens, tree planting, rain barrels, and conservation landscaping. The RainScapes program consists of RainScapes Rewards, a rebate program, and the RainScapes Communities, which evaluates targeted neighborhoods and other communities for on-lot stormwater runoff reduction approaches and facilitates neighborhood participation. To date in FY15, almost 20 impervious acres are being controlled through RainScapes projects for at least the first inch of rainfall, with many projects controlled up to the 1-year storm event. The RainScapes Program is funded through the WQPC.

## Restoration Funding Sources

During FY15, DEP continued to identify funding sources to support project implementation. The approved SWM CIP budget for FY15-FY20 totals \$363.7 million, an increase of \$128.7 million, or 55 percent from the amended approved FY13-FY18 program of \$235 million, reflecting the significant increase in implementation that will be needed to meet the Permit's restoration requirement. This increase in stormwater management activity will be financed primarily through water quality protection bonds. The debt service for these bonds will be supported by the County's WQPC. The budget assumes \$60 million in State aid over the 6 year CIP cycle.

## Assessment of Controls

*The Permit requires that the County use discharge characterization monitoring, along with biological and physical monitoring to assess "the effectiveness of stormwater management programs, County watershed restoration projects, and to document progress towards meeting wasteload allocations (WLAs) indicated in the Total Maximum Daily Loads (TMDLs) approved by the U.S. Environmental Protection Agency (EPA) for watersheds or stream segments located in the County". The Permit specifically requires monitoring where the cumulative effects of watershed restoration activities (the Breewood Tributary) and the effectiveness of stormwater management practices for stream channel protection (Clarksburg Special Protection Area) can be assessed.*

### Watershed Restoration Assessment

The DEP targeted the Breewood tributary of Sligo Creek (Anacostia watershed) for comprehensive watershed restoration efforts and assessment of controls. The Permit requires water chemistry, biological and physical monitoring of the watershed, both pre and post restoration. By FY15, DEP has completed construction of 10 ROW ESD facilities along residential roads, and three RainScapes projects on private property within the Breewood tributary watershed. Additionally, 1,299 feet of stream restoration was completed. Monitoring in 2014 reflected changing conditions in the watershed.

In 2014, water samples were collected at an instream station and a stormwater outfall station for a total of 49 storms and 65 baseflow events monitored from 2009 through 2014. For each station, baseflow mean concentrations (MC) were calculated for all Permit required parameters over the 3-year monitoring period. MCs were also calculated for total petroleum hydrocarbons (TPH) and Enterococcus during first flush stormflow.

Storm event mean concentrations (EMCs) represent the weighted average pollutant concentrations based on samples collected at discrete intervals during a storm. EMCs were calculated and averaged over the three-year monitoring period for each parameter except TPH and Enterococcus. The average EMCs and MCs of each parameter at each station were compared:

- Storm samples generally had more concentrated pollutants at the outfall than at the instream station.
- At the instream station, there was not a consistent relationship between flow types and results.
- At the outfall, no clear trends in pollutant concentrations by flow type were found.

The 2010 thru 2014 biological and physical monitoring results provide evidence that the Breewood tributary is impaired and will likely benefit from stream restoration. Monitoring will continue annually to evaluate improvements to the biology and habitat that are anticipated as a result of the restoration efforts.

### **Stormwater Management Assessment**

#### Maryland Design Manual Monitoring in Clarksburg

DEP monitors the developing Newcut Road Neighborhood tributary to Little Seneca Creek “test” area in the Clarksburg SPA and compares results to those from the undeveloped Soper’s Branch, Little Bennett subwatershed “control” area to evaluate the effectiveness of the Maryland Design Manual criteria to protect the stream channel. Development in the test area’s drainage is mostly complete, and ESC BMPs are being converted to SWM BMPs. The land uses in the Soper’s Branch control area remained unchanged.

In 2014, the natural hydrology of the test area has been altered by the development process. On average, the overall amount of precipitation infiltrating into the ground or lost via evapotranspiration has declined in the test area while remaining fairly constant in the control area. The results indicate the stream channel at the test area may still be in a state of flux as the system responds to the conversion from S&EC to SWM structures. Post-construction monitoring has not yet been completed. DEP has observed changes in the test area channel morphology as evidenced by straightening, down-cutting, and enlargement of the channel

### **Program Funding**

*The Permit requires that the County submit annual expenditures for the capital, operation, and maintenance expenditures in database format specified in Permit Part IV.*

The required database is included in electronic format on CD in Attachment A. During FY15, the reported costs associated with Permit requirements were \$53,505,725.

### **Total Maximum Daily Loads**

*The Permit requires development of implementation plans showing how the County will meet the MS4 WLAs for any EPA approved TMDLs within one year of EPA approval.*

The County Strategy addressed all existing TMDLs in September 2009, the baseline year for the Strategy. Since the baseline date, EPA has approved additional TMDLs, which are shown in Table II.7 below, with the status of their implementation plans. The plans are included in the electronic attachment to this report in Appendix I.

Table II.7. TMDLs Approved Since 2009

Watershed	TMDL	Status of Implementation Plan
Anacostia	PCB	Implementation Plan Submitted in 2013
Cabin John Creek	Sediment	Required Reductions Shown in Strategy
Lower Monocacy	Bacteria	Implementation Plan Complete 2014
Lower Monocacy	Phosphorous	Implementation Plan Complete 2014
Potomac River Direct	Sediment	Implementation Plan Complete 2014
Rock Creek	Sediment	Required Reductions Shown in Strategy
Rock Creek	Phosphorous	Required Reductions Shown in Strategy
Seneca Creek	Sediment	Implementation Plan Complete 2014

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MS4 Information

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Jurisdiction	Montgomery County
Contact Name	Pamela Parker
Phone	240-777-7758
Address	255 Rockville Pike, Suite 120
City	Rockville
State	MD
Zip	20832
Email	<a href="mailto:pamela.parker@montgomerycountymd.gov">pamela.parker@montgomerycountymd.gov</a>
Baseline Acres	3777.00
Permit Num	06-DP-3320-MD0068349
Reporting Year	FY15

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**Check with MDE Geodatabase:**

Should match Permit info table of Geodatabase, except for Impervious Acre Baseline-- that should match Impervious Surface Table.

VERSION 3-8-16

Montgomery County, Maryland 2016 NPDES MS4 Financial Assurance Plan

Article 4-303.10(b)(1)(B): Action that will be required of the entity or municipality to meet its requirements of its National Pollution Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

Note: To be strictly an "action" required under the MS4 permit, provide an executive summary of the jurisdiction's MS4 program. See MD's FAP Guidelines. For proposed actions to meet the independent action requirements, (B) in the table below.

All Actions FY16 and Forward

3,777

Equipment

2016

Project Name	MS4 BMP TYPE	BMP CLASS	BMP ACRES (1)	BAFPL COST(S)	% BAFPL COMPLETE	BAFPL STATUS**	PROJECTED BAFPL YR
Operation Programs	Operation Programs						
MS4	MS4	A		\$511,000			FY16
MS4	MS4	A		\$381,250			FY16
MS4	MS4	A		\$111,000			FY17
MS4	MS4	A		\$85,326			FY17
MS4	MS4	A		\$111,000			FY18
MS4	MS4	A		\$111,000			FY18
MS4	MS4	A		\$211,000			FY19
MS4	MS4	A		\$211,000			FY19
MS4	MS4	A		\$211,000			FY20
MS4	MS4	A		\$211,000			FY20
MS4	MS4	A		\$211,000			FY21
MS4	MS4	A		\$211,000			FY21
MS4	MS4	A		\$211,000			FY22
MS4	MS4	A		\$211,000			FY22
MS4	MS4	A		\$211,000			FY23
MS4	MS4	A		\$211,000			FY23
MS4	MS4	A		\$211,000			FY24
MS4	MS4	A		\$211,000			FY24
MS4	MS4	A		\$211,000			FY25
MS4	MS4	A		\$211,000			FY25
MS4	MS4	A		\$211,000			FY26
MS4	MS4	A		\$211,000			FY26
MS4	MS4	A		\$211,000			FY27
MS4	MS4	A		\$211,000			FY27
MS4	MS4	A		\$211,000			FY28
MS4	MS4	A		\$211,000			FY28
MS4	MS4	A		\$211,000			FY29
MS4	MS4	A		\$211,000			FY29
MS4	MS4	A		\$211,000			FY30
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MS4	MS4	A		\$211,000			FY67
MS4	MS4	A		\$211,000			FY67
MS4	MS4	A		\$211,000			FY68
MS4	MS4	A		\$211,000			FY68
MS4	MS4	A		\$211,000			FY69
MS4	MS4	A		\$211,000			FY69
MS4	MS4	A		\$211,000			FY70
MS4	MS4	A		\$211,000			FY70
MS4	MS4	A		\$211,000			FY71
MS4	MS4	A		\$211,000			FY71
MS4	MS4	A		\$211,000			FY72
MS4	MS4	A		\$211,000			FY72
MS4	MS4	A		\$211,000			FY73
MS4	MS4	A		\$211,000			FY73
MS4	MS4	A		\$211,000			FY74
MS4	MS4	A		\$211,000			FY74
MS4	MS4	A		\$211,000			FY75
MS4	MS4	A		\$211,000			FY75
MS4	MS4	A		\$211,000			FY76
MS4	MS4	A		\$211,000			FY76
MS4	MS4	A		\$211,000			FY77
MS4	MS4	A		\$211,000			FY77
MS4	MS4	A		\$211,000			FY78
MS4	MS4	A		\$211,000			FY78
MS4	MS4	A		\$211,000			FY79
MS4	MS4	A		\$211,000			FY79
MS4	MS4	A		\$211,000			FY80
MS4	MS4	A		\$211,000			FY80
MS4	MS4	A		\$211,000			FY81
MS4	MS4	A		\$211,000			FY81
MS4	MS4	A		\$211,000			FY82
MS4	MS4	A		\$211,000			FY82
MS4	MS4	A		\$211,000			FY83
MS4	MS4	A		\$211,000			FY83
MS4	MS4	A		\$211,000			FY84
MS4	MS4	A		\$211,000			FY84
MS4	MS4	A		\$211,000			FY85
MS4	MS4	A		\$211,000			FY85
MS4	MS4	A		\$211,000			FY86
MS4	MS4	A		\$211,000			FY86
MS4	MS4	A		\$211,000			FY87
MS4	MS4	A		\$211,000			FY87
MS4	MS4	A		\$211,000			FY88
MS4	MS4	A		\$211,000			FY88
MS4	MS4	A		\$211,000			FY89
MS4	MS4	A		\$211,000			FY89
MS4	MS4	A		\$211,000			FY90
MS4	MS4	A		\$211,000			FY90
MS4	MS4	A		\$211,000			FY91
MS4	MS4	A		\$211,000			FY91
MS4	MS4	A		\$211,000			FY92
MS4	MS4	A		\$211,000			FY92
MS4	MS4	A		\$211,000			FY93
MS4	MS4	A		\$211,000			FY93
MS4	MS4	A		\$211,000			FY94
MS4	MS4	A		\$211,000			FY94
MS4	MS4	A		\$211,000			FY95
MS4	MS4	A		\$211,000			FY95
MS4	MS4	A		\$211,000			FY96
MS4	MS4	A		\$211,000			FY96
MS4	MS4	A		\$211,000			FY97
MS4	MS4	A		\$211,000			FY97
MS4	MS4	A		\$211,000			FY98
MS4	MS4	A		\$211,000			FY98
MS4	MS4	A		\$211,000			FY99
MS4	MS4	A		\$211,000			FY99
MS4	MS4	A		\$211,000			FY00
MS4	MS4	A		\$211,000			FY00
MS4	MS4	A		\$211,000			FY01
MS4	MS4	A		\$211,000			FY01
MS4	MS4	A		\$211,000			FY02
MS4	MS4	A		\$211,000			FY02
MS4	MS4	A		\$211,000			FY03
MS4	MS4	A		\$211,000			FY03
MS4	MS4	A		\$211,000			FY04
MS4	MS4	A		\$211,000			FY04
MS4	MS4	A		\$211,000			FY05</

**Montgomery County, Maryland 2016 NPDES MS4 Financial Assurance Plan**

Article 4-202.1(j)(1)(i)2: Projected annual and 5-year costs for the county or municipality to meet the impervious surface restoration plan requirements of its National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

DESCRIPTION	PAST UP THRU 2014	CURRENT FY 2015	PROJECTED YEAR 1 FY 2016	PROJECTED YEAR 2 FY 2017	PROJECTED YEAR 3 FY 2018	PROJECTED YEAR 4 FY 2019	PROJECTED YEAR 5 FY 20	TOTAL COSTS
<b>Operating Expenditures (costs)</b>								
Street Sweeping Program	\$522,943	\$211,000	\$211,000	\$211,000	\$211,000	\$211,000	\$211,000	\$1,788,943
Inlet Cleaning	\$1,209,538	\$353,226	\$353,226	\$353,226	\$353,226	\$353,226	\$353,226	\$3,328,894
Debt Service Payment	\$5,892,181	\$3,011,877	\$3,020,250	\$6,367,900	\$6,342,250	\$11,581,960	\$11,578,400	\$47,794,818
RainScapes	\$477,028	\$165,329	\$165,329	\$165,329	\$165,329	\$165,329	\$165,329	\$1,469,002
<b>Capital Expenditures (costs)</b>								
G.O Bonds	\$1,645,000							\$1,645,000
General Fund (Paygo)	\$390,000							\$390,000
Fed Aid	\$594,000							\$594,000
State Aid	\$8,300,000	\$7,391,000	\$2,760,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$38,451,000
Water Quality Protection Charge (CIP) (Paygo)	\$5,817,000	\$660,000	\$8,254,000	\$6,670,000	\$1,323,000	\$997,000	\$773,000	\$24,494,000
WQPC Bonds	\$27,817,000	\$9,543,000	\$24,917,000	\$38,038,000	\$45,502,000	\$56,638,000	\$57,364,000	\$259,819,000
Stormwater Management Waiver Fee (Paygo)	\$1,031,000			\$200,000	\$200,000	\$200,000	\$200,000	\$1,831,000
Other (please stipulate capital expenditure)*								\$0
Subtotal operation and paygo:	\$15,339,690	\$4,401,432	\$12,003,805	\$13,967,455	\$8,594,805	\$13,508,515	\$13,280,955	\$81,096,657
<b>Total expenditures:</b>	<b>\$53,695,690</b>	<b>\$21,335,432</b>	<b>\$39,680,805</b>	<b>\$57,005,455</b>	<b>\$59,096,805</b>	<b>\$75,146,515</b>	<b>\$75,644,955</b>	<b>\$381,605,657</b>

Total ISRP costs except debt service: \$333,810,839.00  
 Compare ISRP costs (except debt service) / total ISRP proposed actions: 109.10%

**Check with MDE Geodatabase:**

The total current FY 2015 expenditure should be less than the combined total of the "OP\_cost" and "CAP\_Cost" fields in the fiscal analyses table of the geodatabase.  
 The total projected FY 2016 expenditure should be less than the combined total of the "OP\_budget" and "CAP\_budget" fields in the fiscal analyses table of the geodatabase.  
 \*Insert additional rows as necessary.

**Montgomery County, Maryland 2016 NPDES MS4 Financial Assurance Plan**

Article 4-202.1(j)(1)(i)3: Projected annual and 5-year revenues or other funds that will be used to meet the cost for the county or municipality to meet the impervious surface restoration plan requirements under the National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

DESCRIPTION	PAST UP THRU 2014	CURRENT FY 2015	PROJECTED YEAR 1 FY 2016	PROJECTED YEAR 2 FY 2017	PROJECTED YEAR 3 FY 2018	PROJECTED YEAR 4 FY 2019	PROJECTED YEAR 5 FY 2020	TOTAL NEXT 2-YEARS FY 17-18*	TOTAL CURRENT + PROJECTED
Annual Revenue** Appropriated for ISRP	\$53,695,690	\$21,335,432	\$39,680,805	\$57,005,455	\$59,096,805	\$75,146,515	\$75,644,955	\$116,102,260	\$381,605,657
Annual Costs towards ISRP***	\$53,695,690	\$21,335,432	\$39,680,805	\$57,005,455	\$59,096,805	\$75,146,515	\$75,644,955	\$116,102,260	\$381,605,657

Compare annual costs / revenue appropriated: 100%  
WPRP 2016 Reporting Criteria 75%

ISRP = Impervious Surface Restoration Program, or 20% Restoration Requirement

\* Article 4-202.1(j)(2): Demonstration that county or municipality has sufficient funding in the current fiscal year and subsequent fiscal year budgets to meet its estimated cost for the 2-year period immediately following the filing date of the FAP. Note that the appropriations and expenditures include time period up to FY 2018.

\*\* Revenue means "dedicated revenues, funds, or sources of funds (per Article 4-202.1(j)(4)(ii)). Note that budget appropriations have only been approved by governing bodies through FY 2016 at the time of FAP reporting.

\*\*\* See table of ISRP Cost.

VERSION 3-8-16

### Montgomery County Maryland 2016 NPDES MS4 Financial Assurance Plan

Article 4-202.1(j)(1)(i)4: Any sources of funds that will be utilized by the county or municipality to meet the requirements of its National Pollutant Discharge Elimination System Phase I Municipal Separate Storm Sewer System Permit.

SOURCE	PAST UP THRU 2014	CURRENT FY 2015	PROJECTED YEAR 1 FY 2016	PROJECTED YEAR 2 FY 2017	PROJECTED YEAR 3 FY 2018	PROJECTED YEAR 4 FY 2019	PROJECTED YEAR 5 FY 2020	TOTAL PERMIT CYCLE
<b>Paygo Sources</b>								
Water Quality Protection Charge	\$ 86,555,276	\$ 28,232,029	\$ 32,351,520	\$ 34,530,616	\$ 37,892,045	\$ 41,690,438	\$ 46,613,918	\$ 307,865,842
Investment Income	\$ 34,931	\$ 28,213	\$ 63,790	\$ 91,130	\$ 182,260	\$ 273,390	\$ 364,520	\$ 1,038,234
Miscellaneous	\$ 28,127							\$ 28,127
BMP Monitoring Fee			\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
Bag Tax Revenue	\$ 5,667,676	\$ 2,485,541	\$ 2,400,000	\$ 2,280,000	\$ 2,166,000	\$ 1,949,400	\$ 1,754,460	\$ 18,703,077
General Fund (DEP)	\$ 390,000							\$ 390,000
Other Departmental Funds (DOT,DPS,DGS)	\$ 20,640,240	\$ 5,476,661	\$ 4,076,661	\$ 4,076,661	\$ 4,076,661	\$ 4,076,661	\$ 4,076,661	\$ 46,500,206
Stormwater Management Waiver Fees	\$ 1,031,000			\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,831,000
Solid Waste Fund	\$ 29,330,870	\$ 6,783,005	\$ 6,783,005	\$ 6,783,005	\$ 6,783,005	\$ 6,783,005	\$ 6,783,005	\$ 70,028,900
Subtotal Paygo Sources	\$ 143,678,120	\$ 43,005,449	\$ 45,874,976	\$ 48,161,412	\$ 51,499,971	\$ 55,172,894	\$ 59,992,564	\$ 447,385,386
<b>Debt Service (paygo sources will be used to pay off debt service. Note that previous appropriations for debt service used for ISRP is listed in FY 2014).</b>								
General Obligation Bonds	\$ 1,645,000							\$ 1,645,000
Water Quality Protection Revenue Bonds	\$ 27,817,000	\$ 9,543,000	\$ 24,917,000	\$ 38,038,000	\$ 45,502,000	\$ 56,638,000	\$ 57,364,000	\$ 259,819,000
State Revolving Loan Fund								\$
Subtotal Debt Service	\$ 29,462,000	\$ 9,543,000	\$ 24,917,000	\$ 38,038,000	\$ 45,502,000	\$ 56,638,000	\$ 57,364,000	\$ 261,464,000
<b>Grants and Partnerships (no payment is expected)</b>								
State funded grants	\$ 8,300,000	\$ 7,391,000	\$ 2,760,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 38,451,000
Federal funded grants	\$ 594,000							\$ 594,000
Public-private partnership (matched grant)								
Subtotal Grants and Partnerships	\$ 8,894,000	\$ 7,391,000	\$ 2,760,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 39,045,000
<b>Total Annual Sources of Funds</b>	<b>\$ 182,034,120</b>	<b>\$ 112,487,898</b>	<b>\$ 144,343,952</b>	<b>\$ 177,398,824</b>	<b>\$ 199,003,942</b>	<b>\$ 228,621,788</b>	<b>\$ 239,713,128</b>	<b>\$ 1,283,603,652</b>
Percent of Funds Directed Toward ISRP								

includes WQPC for CIP

We are recording revenue from Bonds in this section, not debt service

Compare total paygo ISRP costs / subtotal paygo sources: 18%  
 Compare total ISRP costs / total annual sources of funds: 30%

\* WPR Fund: Watershed Protection and Restoration Fund.

Check with MDE Geodatabase:  
 The total sources related to WPR Funds in Current FY 2015 should match the "WPR\_Fund" field of the geodatabase.

32



